This document gives pertinent information concerning the reissuance of the VPDES Permit listed below. This permit is being processed as a Minor, Municipal permit. The discharge results from the operation of a 0.015 MGD wastewater treatment plant. This permit action consists of updating the WQS and updating boilerplate. The effluent limitations and special conditions contained in this permit will maintain the Water Quality Standards of 9 VAC 25-260-00 et seq.

| | | | | |
|---|---|---|---|---|
| 1. | Facility Name and Mailing Address: | Mountain View Nursing Home STP<br>1776 Elly Road<br>Aroda, VA 22709 | SIC Code : | 4952 |
| | Facility Location: | 1776 Elly Road<br>Aroda, VA 22709 | County: | Madison |
| | Facility Contact Name: | Eldon Hochstetler | Telephone Number: | 540-948-6831 |
| 2. | Permit No.: | VA0063347 | Expiration Date of previous permit: | June 29, 2009 |
| | Other VPDES Permits associated with this facility: | | None. | |
| | Other Permits associated with this facility: | | None. | |
| | E2/E3/E4 Status: | N/A | | |
| 3. | Owner Name: | Oak Grove Mennonite Church | | |
| | Owner Contact/Title: | Eldon Hochstetler/Administrator | Telephone Number: | 540-948-6831 |
| 4. | Application Complete Date: | April 8, 2009 | | |
| | Permit Drafted By: | Susan Oakes | Date Drafted: | May 7, 2009 |
| | Draft Permit Reviewed By: | Alison Thompson | Date Reviewed: | June 15, 2009 |
| | Public Comment Period : | Start Date: July 24, 2009 | End Date: | August 22, 2009 |

5. Receiving Waters Information: See **Attachment 1** for the Flow Frequency Determination

| | | | |
|---|---|---|---|
| Receiving Stream Name : | Great Run, UT | | |
| Drainage Area at Outfall: | 0.84 sq.mi. | River Mile: | 1.45 |
| Stream Basin: | Rappahannock River | Subbasin: | Rappahannock River |
| Section: | 4 | Stream Class: | III |
| Special Standards: | None | Waterbody ID: | E15R |
| 7Q10 Low Flow: | 0.0 MGD | 7Q10 High Flow: | 0.0 MGD |
| 1Q10 Low Flow: | 0.0 MGD | 1Q10 High Flow: | 0.0 MGD |
| Harmonic Mean Flow: | 0.0 MGD | 30Q5 Flow: | 0.0 MGD |
| 303(d) Listed: | No | 30Q10 Flow: | 0.0 MGD |
| TMDL Approved: | (Note: there is a downstream TMDL for the Robinson River for which this facility was given a WLA) | Date TMDL Approved: | 12/12/05 (Robinson River TMDL approved) |

6. Statutory or Regulatory Basis for Special Conditions and Effluent Limitations:

- ✓ State Water Control Law
- ✓ Clean Water Act
- ✓ VPDES Permit Regulation
- ✓ EPA NPDES Regulation
- ✓ EPA Guidelines
- ✓ Water Quality Standards
- ___ Other

7. Licensed Operator Requirements: Class III

8. Reliability Class: Class II

9. Permit Characterization:

| | | |
|---|---|---|
| ✓ Private | ✓ Effluent Limited | ___ Possible Interstate Effect |
| ___ Federal | ✓ Water Quality Limited | ___ Compliance Schedule Required |
| ___ State | ___ Toxics Monitoring Program Required | ___ Interim Limits in Permit |
| ___ POTW | ___ Pretreatment Program Required | ___ Interim Limits in Other Document |
| ✓ TMDL (Robinson River) | | |

**10. Wastewater Sources and Treatment Description:**

The treatment system consists of a grease trap, a sludge holding tank, an anoxic tank with bar screen, an aeration tank, a clarifier tank, an effluent flow weir, a two-tablet chlorination chamber (only one tablet tube is used) followed by a chlorine contact chamber, a two-tablet dechlorination chamber and then a cascade post aeration ladder to an effluent pipe to Outfall 001 which discharges to an unnamed tributary of Great Run. The package plant was installed in February 2006 replacing the lagoon system.

See **Attachment 2** for a facility schematic/diagram.

TABLE 1 – Outfall Description

| Outfall Number | Discharge Sources | Treatment | Design Flow | Outfall Latitude and Longitude |
|---|---|---|---|---|
| 001 | Domestic Wastewater | See Item 10 above. | 0.015 MGD | **38° 20' 19"** N<br>**78° 12' 11"** W |
| See **Attachment 3** for Madison Mills, DEQ #185C topographic map. | | | | |

**11. Sludge Treatment and Disposal Methods:**

Waste sludge from the clarifiers is disposed of via pump-and-haul contractor Garth Septic Service. Garth Septic Service comes on average every two weeks and transports the sludge to the Orange County WWTP (VA0021385) for disposal.

**12. Material Storage:**

TABLE 2 - Material Storage

| Materials Description | Volume Stored | Spill/Stormwater Prevention Measures |
|---|---|---|
| Chlorine Tablets | One to Two 5-gallon buckets | Contained in a secure building |
| Dechlor Tablets | One to Two 5-gallon buckets | Contained in a secure building |

**13. Site Inspection:** Performed by Susan Oakes and Sharon Allen on June 11, 2009 (see **Attachment 4**).

**14. Receiving Stream Water Quality and Water Quality Standards:**

a) Ambient Water Quality Data

There is no monitoring data for the receiving stream (Unnamed Tributary to Great Run). The nearest downstream DEQ ambient water quality monitoring station is located on Great Run at the Route 15 Bridge Crossing (DEQ Station 3-GRA002.01). This station is located approximately 5.57 rivermiles downstream from the outfall of VA0063347. *E. coli* monitoring finds a bacterial impairment. Sufficient excursions from the single sample maximum *E. coli* bacteria criterion (5 of 6 samples - 83.3%) were recorded at monitoring station 3-GRA002.01 to assess this stream segment as not supporting of the recreation use goal for the 2008 water quality assessment. The aquatic life and wildlife uses are considered fully supporting (see the planning statement located in the permit file).

b) Receiving Stream Water Quality Criteria

Part IX of 9 VAC 25-260(360-550) designates classes and special standards applicable to defined Virginia river basins and sections. The receiving stream Great Run, UT is located within Section 4 of the Rappahannock River Basin, and classified as a Class III water.

At all times, Class III waters must achieve a dissolved oxygen (D.O.) of 4.0 mg/L or greater, a daily average D.O. of 5.0 mg/L or greater, a temperature that does not exceed 32°C, and maintain a pH of 6.0-9.0 standard units (S.U.).

**Attachment 5** details other water quality criteria applicable to the receiving stream.

Ammonia:

The 7Q10 and 1Q10 of the receiving stream are 0.0 MGD. In cases such as this, effluent pH and temperature data may be used to establish the ammonia water quality standard. Since the last permit reissuance, the facility has closed the lagoon and now operates a 0.015 mgd package plant; therefore, effluent monitoring data for pH and temperature from May 2006 to February 2009 from the new plant was evaluated. The 90$^{th}$ percentile pH and temperature values were not significantly different to warrant a re-evaluation of the ammonia criteria and subsequent limits; therefore, the effluent limitations will be carried forward with this permit cycle. The effluent data used for the derivation of the 90th percentile pH and temperature values are located in the permit file.

Metals Criteria:

There is no hardness data for this facility. Staff guidance suggests using a default hardness value of 50 mg/l $CaCO_3$ for streams east of the Blue Ridge. The hardness-dependent metals criteria in **Attachment 5** are based on this in-stream value.

Bacteria Criteria: The Virginia Water Quality Standards (9 VAC 25-260-170 B.) states sewage discharges shall be disinfected to achieve the following criteria:

1) *E. coli* bacteria per 100 ml of water shall not exceed the following:

| | Geometric Mean[1] | Single Sample Maximum |
|---|---|---|
| Freshwater *E. coli* (N/100 ml) | 126 | 235 |

[1]For two or more samples [taken during any calendar month].

c) Receiving Stream Special Standards

The State Water Control Board's Water Quality Standards, River Basin Section Tables (9VAC 25-260-360, 370 and 380) designates the river basins, sections, classes, and special standards for surface waters of the Commonwealth of Virginia. The receiving stream, Great Run, UT, is located within Section 4 of the Rappahannock River Basin. Previously, this section had Special Standard New-15; however, this standard was repealed; therefore, this section has no special standard designations.

d) Threatened or Endangered Species

The Virginia DGIF Fish and Wildlife Information System Database was searched for records to determine if there are threatened or endangered species in the vicinity of the discharge. No threatened or endangered species were identified (see the DGIF report located in the permit file).

**15. Antidegradation (9 VAC 25-260-30):**

All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The receiving stream was previously classified as Tier 1 since the critical flows 7Q10 and 1Q10 were determined to be zero. Under critical flows of zero, the stream has the potential to be composed entirely of effluent, as such, a Tier 1 designation is appropriate and the use protective; therefore, the Tier 1 designation is carried forward with this reissuance. Permit limits proposed have been established by determining wasteload allocations which will result in attaining and/or maintaining all water quality criteria which apply to the receiving stream, including narrative criteria. These wasteload allocations will provide for the protection and maintenance of all existing uses.

**16. Effluent Screening, Wasteload Allocation, and Effluent Limitation Development :**

To determine water quality-based effluent limitations for a discharge, the suitability of data must first be determined. Data is suitable for analysis if one or more representative data points is equal to or above the quantification level ("QL") and the data represent the exact pollutant being evaluated.

Next, the appropriate Water Quality Standards (WQS) are determined for the pollutants in the effluent. Then, the Wasteload Allocations (WLA) are calculated. In this case since the critical flows 7Q10 and 1Q10 have been determined to be zero, the WLA's are equal to the WQS. The WLA values are then compared with available effluent data to determine the need for effluent limitations. Effluent limitations are needed if the 97th percentile of the daily effluent concentration values is greater than the acute wasteload allocation or if the 97th percentile of the four-day average effluent concentration values is greater than the chronic wasteload allocation. Effluent limitations are based on the most limiting WLA, the required sampling frequency, and statistical characteristics of the effluent data.

a) Effluent Screening:
Effluent data obtained from DMRs have been reviewed and determined to be suitable for evaluation. DMR data from the timeframe February 2006 through April 2006 was not included in the evaluation as the data was collected during the start up timeframe given to the facility for system adjustments under the consent order. Data reviewed after this timeframe showed one Chlorine CONCMAX, three *E. coli* CONCAVG, one Ammonia CONCAVG and CONCMAX, and four TSS exceedances from July 2006 through August 2008.

b) Mixing Zones and Wasteload Allocations (WLAs):

Wasteload allocations (WLAs) are calculated for those parameters in the effluent with the reasonable potential to cause an exceedance of water quality criteria. The basic calculation for establishing a WLA is the steady state complete mix equation:

$$WLA = \frac{C_o [ Q_e + ( f ) (Q_s ) ] - [ ( C_s ) ( f ) ( Q_s ) ]}{Q_e}$$

Where:
- WLA = Wasteload allocation
- $C_o$ = In-stream water quality criteria
- $Q_e$ = Design flow
- $Q_s$ = Critical receiving stream flow (1Q10 for acute aquatic life criteria; 7Q10 for chronic aquatic life criteria; harmonic mean for carcinogen-human health criteria; 30Q10 for ammonia criteria and 30Q5 for non-carcinogen human health criteria)
- f = Decimal fraction of critical flow
- $C_s$ = Mean background concentration of parameter in the receiving stream.

The water segment receiving the discharge via Outfall 001 is considered to have a 7Q10 and 1Q10 of 0.0 MGD. As such, there is no mixing zone and the WLA is equal to the $C_o$.

c) Effluent Limitations Toxic Pollutants, Outfall 001

9 VAC 25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Those parameters with WLAs that are near effluent concentrations are evaluated for limits.

The VPDES Permit Regulation at 9 VAC 25-31-230.D. requires that monthly and weekly average limitations be imposed for continuous discharges from POTWs and monthly average and daily maximum limitations be imposed for all other continuous non-POTW discharges.

1) Ammonia as N:

Staff evaluated the new effluent data and has concluded it is not significantly different than what was used to derive the existing ammonia limits (**Attachment 6**). Therefore, existing ammonia limitations are proposed to continue in the reissued permit.

2) Total Residual Chlorine:

Chlorine is used for disinfection and is potentially in the discharge. Staff calculated WLAs for TRC using current critical flows and the mixing allowance. In accordance with current DEQ guidance, staff used a default data point of 0.2 mg/L and the calculated WLAs to derive limits. A monthly average of 0.008 mg/L and a weekly average limit of 0.010 mg/L are carried forward from the previous permit for this discharge (see **Attachment 7**).

3) Metals:

No limits are needed.

d) Effluent Limitations and Monitoring, Outfall 001 – Conventional and Non-Conventional Pollutants

No changes to dissolved oxygen (D.O.), biochemical oxygen demand-5 day ($BOD_5$), total suspended solids (TSS), and pH limitations are proposed.

Dissolved Oxygen and $BOD_5$ are based on the stream modeling conducted in May 1978 (**Attachment 8**) and are set to meet the water quality criteria for D.O. in the receiving stream.

It is staff's practice to equate the Total Suspended Solids limits with the $BOD_5$. TSS limits are established to equal $BOD_5$ limits since the two pollutants are closely related in terms of treatment of domestic sewage. Since the design flow of the package plant is 0.015, the mass loading (kg/d) for monthly and weekly averages were re-calculated for $BOD_5$ and TSS by multiplying the concentration values (mg/l), with the flow values (in MGD) and a conversion factor of 3.785.

pH limitations are set at the water quality criteria.

*E. coli* limitations are in accordance with the Water Quality Standards 9 VAC25-260-170 and based on the WLA given to the permittee as part of the Robinson River Bacteria TMDL.

e) Effluent Limitations and Monitoring Summary.

The effluent limitations are presented in the following table. Limits were established for Flow, $BOD_5$, Total Suspended Solids, Ammonia, pH, Dissolved Oxygen, Total Residual Chlorine and *E. coli*.

The limit for Total Suspended Solids is based on Best Professional Judgement.

The mass loading (kg/d) for monthly and weekly averages were calculated by multiplying the concentration values (mg/l), with the flow values (in MGD) and a conversion factor of 3.785.

Sample Type and Frequency are in accordance with the recommendations in the VPDES Permit Manual.

The VPDES Permit Regulation at 9 VAC 25-31-30 and 40 CFR Part 133 require that the facility achieve at least 85% removal for $BOD_5$ and TSS (or 65% for equivalent to secondary). The limits in this permit are water-quality based and it is staff's best professional judgment that they result in greater than 85% removal.

**17. Antibacksliding:**

All limits in this permit are at least as stringent as those previously established. Backsliding does not apply to this reissuance.

**18. Effluent Limitations/Monitoring Requirements:**

Design flow is 0.015 MGD.
Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

| PARAMETER | BASIS FOR LIMITS | DISCHARGE LIMITATIONS | | | | MONITORING REQUIREMENTS | |
|---|---|---|---|---|---|---|---|
| | | Monthly Average | Weekly Average | Minimum | Maximum | Frequency | Sample Type |
| Flow (MGD) | NA | NL | NA | NA | NL | 1/D | Estimate |
| pH | 3 | NA | NA | 6.0 S.U. | 9.0 S.U. | 1/D | Grab |
| $BOD_5$ | 3,5 | 30 mg/L 1.7 kg/d | 45 mg/L 2.6 kg/d | NA | NA | 2/M | Grab |
| Total Suspended Solids (TSS) | 2 | 30 mg/L 1.7 kg/d | 45 mg/L 2.6 kg/d | NA | NA | 2/M | Grab |
| DO | 3,5 | NA | NA | 6.0 mg/L | NA | 1/D | Grab |
| Ammonia, as N (mg/L) | 3,5 | 2.2 mg/L | 2.7 mg/L | NA | NA | 2/M | Grab |
| *E. coli* (Geometric Mean) | 3 | 126 n/100mls | NA | NA | NA | 2/M* | Grab |
| Total Residual Chlorine (after contact tank) | 2, 3, 4 | NA | NA | 1.0 mg/L | NA | 1/D | Grab |
| Total Residual Chlorine (after dechlorination) | 3 | 0.008 mg/L | 0.010 mg/L | NA | NA | 1/D | Grab |

The basis for the limitations codes are:
1. Federal Effluent Requirements
2. Best Professional Judgement
3. Water Quality Standards
4. DEQ Disinfection Guidance
5. Stream Model- Attachment 8

*MGD* = Million gallons per day.
*N/A* = Not applicable.
*NL* = No limit; monitor and report.
*S.U.* = Standard units.
*EST* = Estimate

*1/D* = Once every day.
*2/M* = Twice every month greater than 7 days apart.
* = Between 10 am and 4 pm.

EST = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.
Grab = An individual sample collected over a period of time not to exceed 15-minutes.

**19. Other Permit Requirements :**

a) Part I.B. of the permit contains additional chlorine monitoring requirements, quantification levels and compliance reporting instructions.
A minimum chlorine residual must be maintained at the exit of the chlorine contact tank to assure adequate disinfection. No more that 10% of the monthly test results for TRC at the exit of the chlorine contact tank shall be <1.0 mg/L with any TRC <0.6 mg/L considered a system failure. Monitoring at numerous STPs has concluded that a TRC residual of 1.0 mg/L is an adequate indicator of compliance with the *E. coli* criteria. *E. coli* limits are defined in this section as well as monitoring requirements to take effect should an alternate means of disinfection be used.

9 VAC 25-31-190.L.4.c. requires an arithmetic mean for measurement averaging and 9 VAC 25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Specific analytical methodologies for toxics are listed in this permit section as well as quantification levels (QLs) necessary to demonstrate compliance with applicable permit limitations or for use in future evaluations to determine if the pollutant has reasonable potential to cause or contribute to a violation. Required averaging methodologies are also specified.

**20. Other Special Conditions :**

a) 95% Capacity Reopener. The VPDES Permit Regulation at 9 VAC 25-31-200.B.2. requires all POTWs and PVOTWs develop and submit a plan of action to DEQ when the monthly average influent flow to their sewage treatment plant reaches 95% or more of the design capacity authorized in the permit for each month of any three consecutive month period. The facility is a PVOTW.

b) Indirect Dischargers. Required by VPDES Permit Regulation, 9 VAC 25-31-280 B.9 for POTWs and PVOTWs that receive waste from someone other than the owner of the treatment works.

c) O&M Manual Requirement. Required by Code of Virginia §62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790; VPDES Permit Regulation, 9 VAC 25-31-190.E. By November 26, 2009, the permittee shall submit for approval an Operations and Maintenance (O&M) Manual or a statement confirming the accuracy and completeness of the current O&M Manual to the Department of Environmental Quality, Northern Regional Office (DEQ-NRO). Future changes to the facility must be addressed by the submittal of a revised O&M Manual within 90 days of the changes. Non-compliance with the O&M Manual shall be deemed a violation of the permit.

d) CTC, CTO Requirement. The Code of Virginia § 62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790 requires that all treatment works treating wastewater obtain a Certificate to Construct prior to commencing construction and to obtain a Certificate to Operate prior to commencing operation of the treatment works.

e) Licensed Operator Requirement. The Code of Virginia at §54.1-2300 et seq. and the VPDES Permit Regulation at 9 VAC 25-31-200 C, and Rules and Regulations for Waterworks and Wastewater Works Operators (18 VAC 160-20-10 et seq.) requires licensure of operators. This facility requires a Class III operator.

f) Reliability Class. The Sewage Collection and Treatment Regulations at 9 VAC 25-790 require sewage treatment works to achieve a certain level of reliability in order to protect water quality and public health consequences in the event of component or system failure. Reliability means a measure of the ability of the treatment works to perform its designated function without failure or interruption of service. The facility is required to meet a reliability Class of II based on the public water supply raw water intake for Wilderness WTP located downstream of the discharge point.

g) Water Quality Criteria Reopener. The VPDES Permit Regulation at 9 VAC 25-31-220 D. requires establishment of effluent limitations to ensure attainment/maintenance of receiving stream water quality criteria. Should effluent monitoring indicate the need for any water quality-based limitations, this permit may be modified or alternatively revoked and reissued to incorporate appropriate limitations.

h) Sludge Reopener. The VPDES Permit Regulation at 9 VAC 25-31-200.C.4. requires all permits issued to treatment works treating domestic sewage (including sludge-only facilities) include a reopener clause allowing incorporation of any applicable standard for sewage sludge use or disposal promulgated under Section 405(d) of the CWA. The facility includes a sewage treatment works.

i) Sludge Use and Disposal. The VPDES Permit Regulation at 9 VAC 25-31-100.P., 220.B.2., and 420-720, and 40 CFR Part 503 require all treatment works treating domestic sewage to submit information on their sludge use and disposal practices and to meet specified standards for sludge use and disposal. The facility includes a treatment works treating domestic sewage.

j) Treatment Works Closure Plan. The State Water Control Law §62.1-44.15:1.1, makes it illegal for an owner to cease operation and fail to implement a closure plan when failure to implement the plan would result in harm to human health or the environment. This condition is used to notify the owner of the need for a closure plan where a facility is being replaced or is expected to close.

Permit Section Part II. Part II of the permit contains standard conditions that appear in all VPDES Permits. In general, these standard conditions address the responsibilities of the permittee, reporting requirements, testing procedures and records retention.

**21. Changes to the Permit from the Previously Issued Permit:**

a) Special Conditions:
None.

b) Monitoring and Effluent Limitations:
Monthly and weekly average loadings for $BOD_5$ and TSS are now 1.7 kg/d and 2.6 kg/d due to the change in design flow to 0.015 mgd.

**22. Variances/Alternate Limits or Conditions:**

None.

**23. Public Notice Information:**

First Public Notice Date: July 23, 2009 Second Public Notice Date: July 30, 2009

Public Notice Information is required by 9 VAC 25-31-280 B. All pertinent information is on file and may be inspected, and copied by contacting the: DEQ Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193, Telephone No. (703) 583-3863, susan.oakes@deq.virginia.gov. See **Attachment 9** for a copy of the public notice document.

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requester's interests would be directly and adversely affected by the proposed permit action. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given.

**24. 303 (d) Listed Stream Segments and Total Max. Daily Loads (TMDL):**

This facility does not discharge to a segment that is listed in the current 303(d) list; however, Great Run (Assessment Unit VAN-E15R_GRA01A04) is listed as impaired for not meeting the recreational water quality standard due to exceedances of the *E. coli* criterion. Sufficient excursions from the single sample maximum *E. coli* bacteria criterion (5 of 6 samples - 83.3%) were recorded at DEQ's ambient water quality monitoring station (3-GRA002.01) at the Route 15 bridge crossing to assess this stream segment as not supporting of the recreation use goal for the 2008 water quality assessment. While a TMDL has not been completed for the bacteria impairment on Great Run, a TMDL was developed and completed for a downstream segment of the Robinson River. The TMDL did not specifically address the receiving stream (UT to Great Run); however, the TMDL did include all upstream point source dischargers. The load from this facility is less than 1% of the TMDL for the Robinson River and thus, from EPA's perspective, is seen as insignificant. The WLA for this facility will be **2.18E+10 cfu/year of *E. coli* bacteria.** This permit has a limit of 126n/100 ml for *E. coli* which is in compliance with the TMDL (see planning statement located in permit file).

TMDL Reopener: This special condition is to allow the permit to be reopened if necessary to bring it in compliance with any applicable TMDL that may be developed and approved for the receiving stream.

**Special Permit considerations:**

None.

**25. Additional Comments:**

Previous Board Action(s): Oak Grove Mennonite Church (Oak Grove) was originally under a Consent Order (order), effective December 14, 2000 to upgrade the STP in two phases. Upon completion of Phase I, the facility could not consistently comply with its permit limits and commenced Phase II which was to install a package plant. The order was amended twice, effective June 21, 2004 and March 17, 2006 for delays in submittal of approvable plans and specifications and construction completion. The new plant was put on line in February 2006.

Oak Grove was then issued an order effective December 4, 2007 for effluent limitation exceedances for *E. coli*, Total Residual Chlorine, Ammonia and Total Suspended Solids. Oak Grove complied with all of the terms of the order and the order was canceled on June 16, 2008.

Staff Comments: None.

Public Comment: DEQ received two email comments during the public notice period. Comments were received from Madison County residents. The first mistakenly thought that the facility was on pump and haul because they could not meet permit requirements. DEQ emailed a reply addressing the misinformation stating that the facility was not on pump and haul and were operating in accordance with their permit.

The second citizen misread the public notice stating that the public notice did not contain the information identifying the permit as a reissuance and did not address the requirement that the permit will limit pollutants that protect water quality. Additionally, the citizen commented on concerns addressing the discharge of Pharmaceuticals and Personal Care Products (PPCP's) and requested that DEQ extend the public notice period. DEQ addressed the comments and responded to the citizen. No changes to the permit were required as a result of the comments.

EPA Checklist: The checklist can be found in **Attachment 10**.

Mountain View Nursing Home STP
Fact Sheet Attachments – Table of Contents
VA0063347

Flow Frequency Determination (updated)
Mountain View Nursing Home STP VA0063347

Robinson River near Locust Dale, VA (#01666500):

Drainage Area = 179 $mi^2$

| Low flow | | High flow | |
|---|---|---|---|
| 1Q10 = 6.3 cfs | 4.1 mgd | 1Q10 = 40 cfs | 25.9 mgd |
| 7Q10 = 8.9 cfs | 5.8 mgd | 7Q10 = 47 cfs | 30.4 mgd |
| 30Q5 = 21 cfs | 13.6 mgd | 30Q10 = 61 cfs | 39 mgd |
| 30Q10 = 15 cfs | 9.7mgd | HM = 79 cfs | 51 mgd |
| 1Q30 = 3.2 cfs | 2.1 mgd | | |

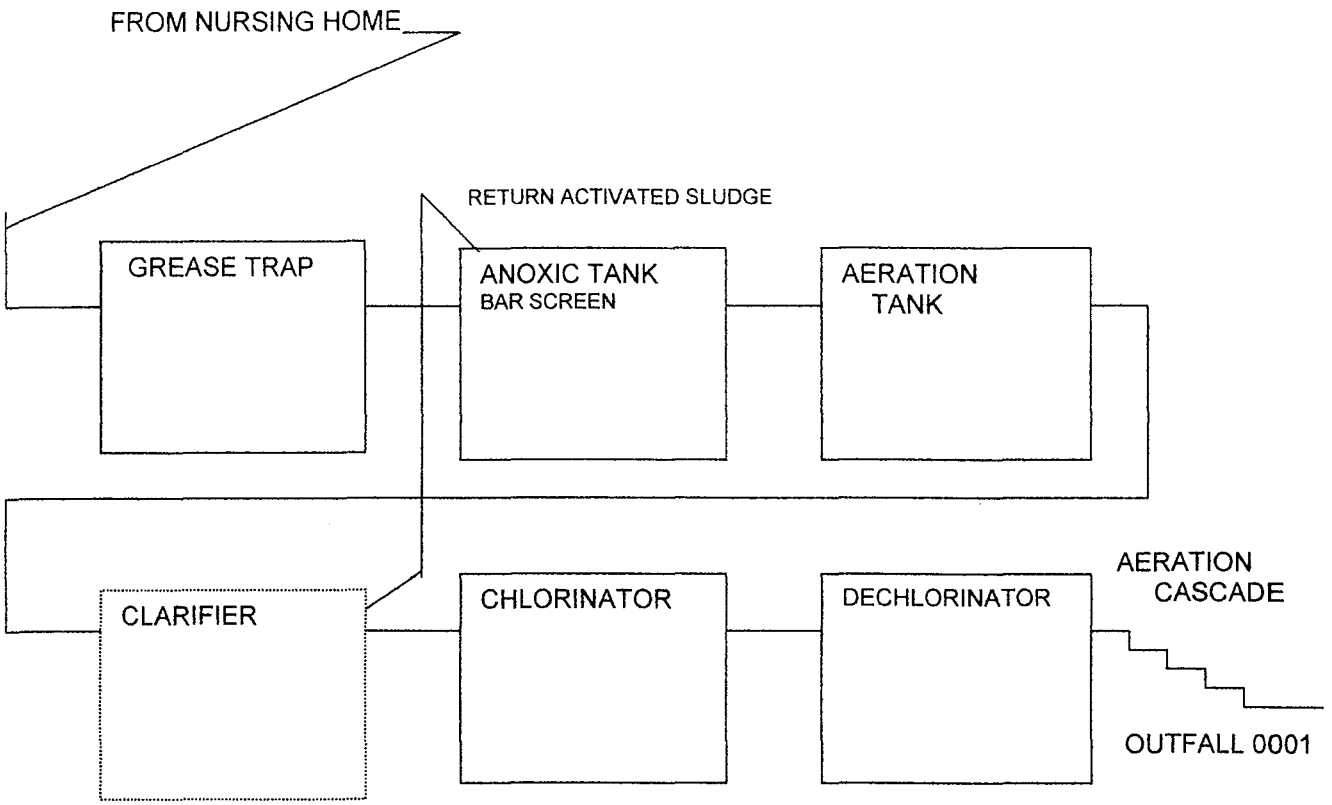
Cedar Run at discharge point:

Drainage Area = 0.84 $mi^2$

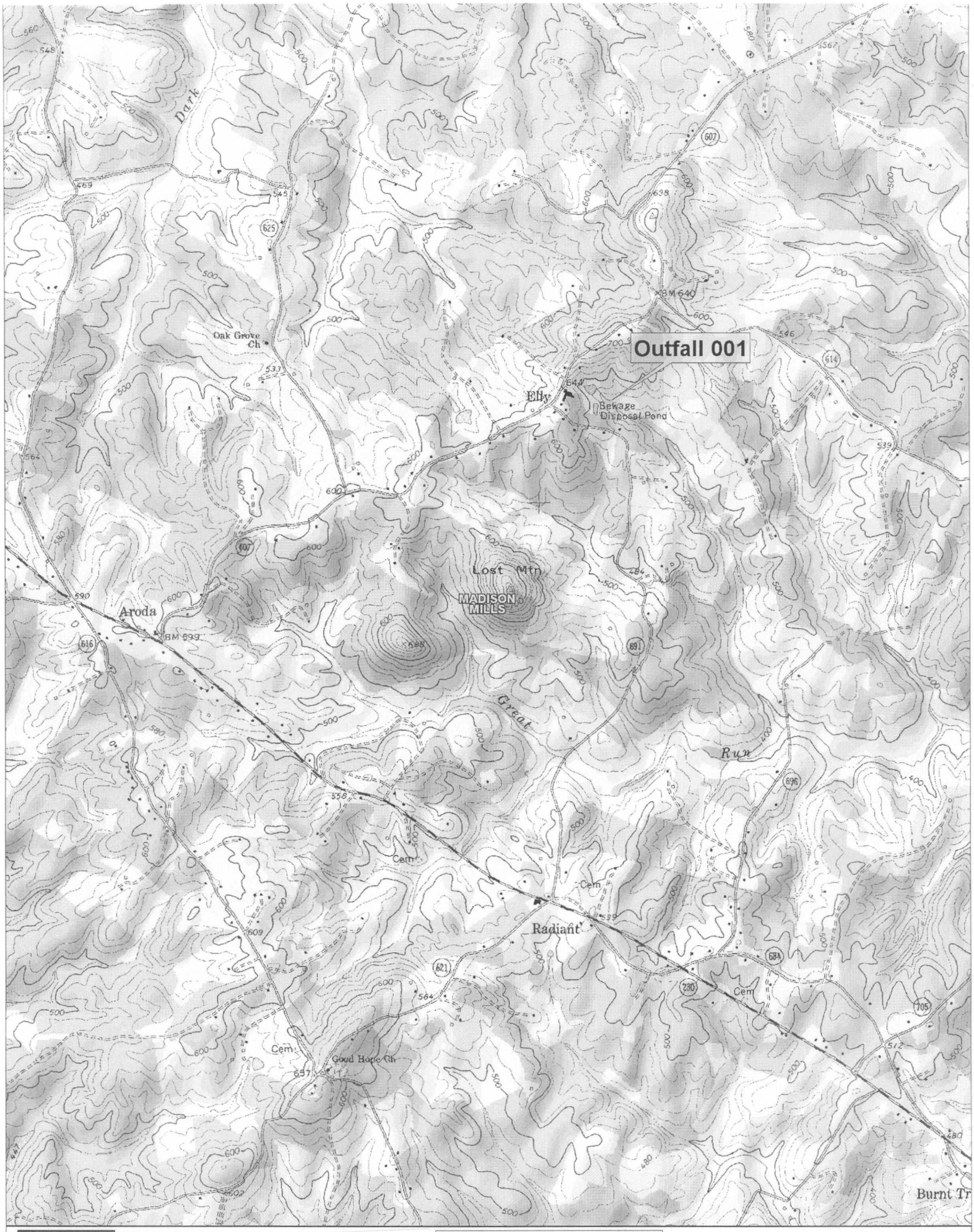
| Low flow | | High flow | |
|---|---|---|---|
| 1Q10 = 0.03 cfs | 0.02 mgd | 1Q10 = 0.19 cfs | 0.12 mgd |
| 7Q10 = 0.04 cfs | 0.03 mgd | 7Q10 = 0.22 cfs | 0.14 mgd |
| 30Q5 = 0.10 cfs | 0.06 mgd | 30Q10 = 0.29 cfs | 0.19 mgd |
| 30Q10 = 0.07 cfs | 0.05 mgd | HM = 0.37 cfs | 0.24 mgd |

(Gaging station data December – May 1943 – 2003)

MOUNTAIN VIEW NURSING HOME WASTEWATER TREATMENT PLANT
FLOW DIAGRAM




**Attachment 2**




DeLORME

**Attachment 3**

June 15, 2009
**MEMORANDUM**

To: Permit Reissuance Site Inspection Attachment

From: Susan Oakes, Permit Writer

Subject: June 11, 2009 Site Visit Mountain View Nursing Home

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On June 11, 2009, DEQ conducted a site inspection of the Mountain View Nursing Home STP for permit reissuance. Persons present during the inspection were Eldon Hochstetler, Nursing Home Administrator and Alvin Zook, Plant Operator, and for DEQ, Sharon Allen Compliance Inspector and Susan Oakes, Permit Writer.

As part of an enforcement action, the package plant was installed in February 2006 to replace the lagoon system. The treatment system consists of a grease trap, a sludge holding tank, anoxic tank with bar screen, aeration tank, a clarifier tank to an effluent flow weir, to a two-tablet chlorination chamber (only one tablet tube is used) followed by a chlorine contact chamber to a two-tablet dechlorination chamber then on to cascade post aeration and to Outfall 001.

Flow from the nursing home first passes through a grease trap outside the kitchen area then travels via three manholes which carry the wastewater flow down the hill to the STP. Flow then enters the head of the plant by first passing through another grease trap and then a bar screen at the head of the anoxic tank. The sludge holding tank positioned at the head of the plant. Sludge is wasted approximately every two to four weeks and removed by Garth Septic Haulers who transport the sludge to the Orange WWTP for disposal. Approximately 1,500 gallons are wasted. Waste water from the sludge is pumped back through the plant. Foam was noted throughout the process as seen in the attached photos. Mr. Zook stated that he hoses it down daily.

Approximately every two months the grease trap is cleaned out. Additionally, any solids that may accumulate in the chlorination and dechlorination chambers are also cleaned out at this time.

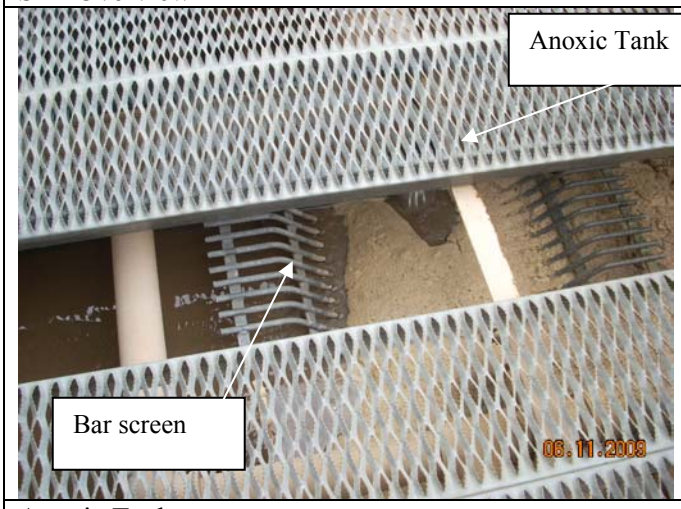
Three pumps are located in the pump room of the lab building. Mr. Zook stated that usually one pump at a time is used and they are switched daily. One to two 5-gallon buckets of chlor and dechlor tablets are stored in the pump room.

The plant discharges at Outfall 001 to a UT of Great Run. The effluent at the outfall pipe appeared clear. The UT bottom was sandy for the most part. The UT appeared to range from approximately one foot to two foot wide in certain areas. Downstream approximately twelve feet, a slightly rocky bottom was observed. There was no noticeable observed effect to the stream due to this discharge.

Nursing home staff noted that Mr. Tim Clemons (a licensed operator), stops by at least once a week to check and observe the operations. I was also noted that Mr. Clemons is on call if needed.


STP Overview


Sludge Holding Tank




Anoxic Tank


Aeration Tank


Clarifier


Clarifier

| | |
|---|---|
|  |  |
| Effluent Flow Weir | Effluent Flow Weir |
|  |  |
| Tablet Chlorination Chamber | Chlorine Contact Chamber |
|  |  |
| Tablet Dechlorination Chamber | Cascade Post Aeration |

| | |
|---|---|
|  |  |
| Outfall 001 | Great Run, UT |
|  |  |
| Great Run, UT | Downstream Shot Great Run, UT |
|  |  |
| Lab & Mechanical Building | Pumps |

| | |
|---|---|
|   | |
| Lab | |

# FRESHWATER
# WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Mountain View Nursing Home STP  Permit No.: VA0063347

Receiving Stream: Great Run, UT  Version: OWP Guidance Memo 00-2011 (8/24/00)

| Stream Information | | | Stream Flows | | | Mixing Information | | | Effluent Information | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean Hardness (as CaCO3) = | | mg/L | 1Q10 (Annual) = | 0 | MGD | Annual - 1Q10 Mix = | 0 | % | Mean Hardness (as CaCO3) = | 50 | mg/L |
| 90% Temperature (Annual) = | | deg C | 7Q10 (Annual) = | 0 | MGD | - 7Q10 Mix = | 0 | % | 90% Temp (Annual) = | 25.6 | deg C |
| 90% Temperature (Wet season) = | | deg C | 30Q10 (Annual) = | 0 | MGD | - 30Q10 Mix = | 0 | % | 90% Temp (Wet season) = | | deg C |
| 90% Maximum pH = | | SU | 1Q10 (Wet season) = | 0 | MGD | Wet Season - 1Q10 Mix = | 0 | % | 90% Maximum pH = | 8 | SU |
| 10% Maximum pH = | | SU | 30Q10 (Wet season) | 0 | MGD | - 30Q10 Mix = | 0 | % | 10% Maximum pH = | | SU |
| Tier Designation (1 or 2) = | 1 | | 30Q5 = | 0 | MGD | | | | Discharge Flow = | 0.015 | MGD |
| Public Water Supply (PWS) Y/N? = | n | | Harmonic Mean = | 0 | MGD | | | | | | |
| Trout Present Y/N? = | n | | Annual Average = | 0 | MGD | | | | | | |
| Early Life Stages Present Y/N? = | y | | | | | | | | | | |

| Parameter | Background | Water Quality Criteria | | | | Wasteload Allocations | | | | Antidegradation Baseline | | | | Antidegradation Allocations | | | | **Most Limiting Allocations** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (ug/l unless noted) | Conc. | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | **Acute** | **Chronic** | **HH (PWS)** | **HH** |
| Acenapthene | 0 | -- | -- | na | 2.7E+03 | -- | -- | na | 2.7E+03 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **2.7E+03** |
| Acrolein | 0 | -- | -- | na | 7.8E+02 | -- | -- | na | 7.8E+02 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **7.8E+02** |
| Acrylonitrile[C] | 0 | -- | -- | na | 6.6E+00 | -- | -- | na | 6.6E+00 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **6.6E+00** |
| Aldrin [C] | 0 | 3.0E+00 | -- | na | 1.4E-03 | 3.0E+00 | -- | na | 1.4E-03 | -- | -- | -- | -- | -- | -- | -- | -- | **3.0E+00** | **--** | **na** | **1.4E-03** |
| Ammonia-N (mg/l) (Yearly) | 0 | 8.41E+00 | 1.19E+00 | na | -- | 8.4E+00 | 1.2E+00 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **8.4E+00** | **1.2E+00** | **na** | **--** |
| Ammonia-N (mg/l) (High Flow) | 0 | 8.41E+00 | 2.43E+00 | na | -- | 8.4E+00 | 2.4E+00 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **8.4E+00** | **2.4E+00** | **na** | **--** |
| Anthracene | 0 | -- | -- | na | 1.1E+05 | -- | -- | na | 1.1E+05 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.1E+05** |
| Antimony | 0 | -- | -- | na | 4.3E+03 | -- | -- | na | 4.3E+03 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **4.3E+03** |
| Arsenic | o | 3.4E+02 | 1.5E+02 | na | -- | 3.4E+02 | 1.5E+02 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **3.4E+02** | **1.5E+02** | **na** | **--** |
| Barium | 0 | -- | -- | na | -- | -- | -- | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **--** |
| Benzene [C] | 0 | -- | -- | na | 7.1E+02 | -- | -- | na | 7.1E+02 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **7.1E+02** |
| Benzidine[C] | 0 | -- | -- | na | 5.4E-03 | -- | -- | na | 5.4E-03 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **5.4E-03** |
| Benzo (a) anthracene [C] | 0 | -- | -- | na | 4.9E-01 | -- | -- | na | 4.9E-01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **4.9E-01** |
| Benzo (b) fluoranthene [C] | 0 | -- | -- | na | 4.9E-01 | -- | -- | na | 4.9E-01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **4.9E-01** |
| Benzo (k) fluoranthene [C] | 0 | -- | -- | na | 4.9E-01 | -- | -- | na | 4.9E-01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **4.9E-01** |
| Benzo (a) pyrene [C] | 0 | -- | -- | na | 4.9E-01 | -- | -- | na | 4.9E-01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **4.9E-01** |
| Bis2-Chloroethyl Ether | 0 | -- | -- | na | 1.4E+01 | -- | -- | na | 1.4E+01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.4E+01** |
| Bis2-Chloroisopropyl Ether | 0 | -- | -- | na | 1.7E+05 | -- | -- | na | 1.7E+05 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.7E+05** |
| Bromoform [C] | 0 | -- | -- | na | 3.6E+03 | -- | -- | na | 3.6E+03 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **3.6E+03** |
| Butylbenzylphthalate | 0 | -- | -- | na | 5.2E+03 | -- | -- | na | 5.2E+03 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **5.2E+03** |
| Cadmium | 0 | 1.8E+00 | 6.6E-01 | na | -- | 1.8E+00 | 6.6E-01 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **1.8E+00** | **6.6E-01** | **na** | **--** |
| Carbon Tetrachloride [C] | 0 | -- | -- | na | 4.4E+01 | -- | -- | na | 4.4E+01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **4.4E+01** |
| Chlordane [C] | 0 | 2.4E+00 | 4.3E-03 | na | 2.2E-02 | 2.4E+00 | 4.3E-03 | na | 2.2E-02 | -- | -- | -- | -- | -- | -- | -- | -- | **2.4E+00** | **4.3E-03** | **na** | **2.2E-02** |
| Chloride | 0 | 8.6E+05 | 2.3E+05 | na | -- | 8.6E+05 | 2.3E+05 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **8.6E+05** | **2.3E+05** | **na** | **--** |
| TRC | 0 | 1.9E+01 | 1.1E+01 | na | -- | 1.9E+01 | 1.1E+01 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **1.9E+01** | **1.1E+01** | **na** | **--** |
| Chlorobenzene | 0 | -- | -- | na | 2.1E+04 | -- | -- | na | 2.1E+04 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **2.1E+04** |

**Attachment 5**

| Parameter | Background | Water Quality Criteria | | | | Wasteload Allocations | | | | Antidegradation Baseline | | | | Antidegradation Allocations | | | | **Most Limiting Allocations** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (ug/l unless noted) | Conc. | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | **Acute** | **Chronic** | **HH (PWS)** | **HH** |
| Chlorodibromomethane[C] | 0 | -- | -- | na | 3.4E+02 | -- | -- | na | 3.4E+02 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **3.4E+02** |
| Chloroform [C] | 0 | -- | -- | na | 2.9E+04 | -- | -- | na | 2.9E+04 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **2.9E+04** |
| 2-Chloronaphthalene | 0 | -- | -- | na | 4.3E+03 | -- | -- | na | 4.3E+03 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **4.3E+03** |
| 2-Chlorophenol | 0 | -- | -- | na | 4.0E+02 | -- | -- | na | 4.0E+02 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **4.0E+02** |
| Chlorpyrifos | 0 | 8.3E-02 | 4.1E-02 | na | -- | 8.3E-02 | 4.1E-02 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **8.3E-02** | **4.1E-02** | **na** | **--** |
| Chromium III | 0 | 3.2E+02 | 4.2E+01 | na | -- | 3.2E+02 | 4.2E+01 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **3.2E+02** | **4.2E+01** | **na** | **--** |
| Chromium VI | 0 | 1.6E+01 | 1.1E+01 | na | -- | 1.6E+01 | 1.1E+01 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **1.6E+01** | **1.1E+01** | **na** | **--** |
| Chromium, Total | 0 | -- | -- | na | -- | -- | -- | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **--** |
| Chrysene [C] | 0 | -- | -- | na | 4.9E-01 | -- | -- | na | 4.9E-01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **4.9E-01** |
| Copper | 0 | 7.0E+00 | 5.0E+00 | na | -- | 7.0E+00 | 5.0E+00 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **7.0E+00** | **5.0E+00** | **na** | **--** |
| Cyanide | 0 | 2.2E+01 | 5.2E+00 | na | 2.2E+05 | 2.2E+01 | 5.2E+00 | na | 2.2E+05 | -- | -- | -- | -- | -- | -- | -- | -- | **2.2E+01** | **5.2E+00** | **na** | **2.2E+05** |
| DDD [C] | 0 | -- | -- | na | 8.4E-03 | -- | -- | na | 8.4E-03 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **8.4E-03** |
| DDE [C] | 0 | -- | -- | na | 5.9E-03 | -- | -- | na | 5.9E-03 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **5.9E-03** |
| DDT [C] | 0 | 1.1E+00 | 1.0E-03 | na | 5.9E-03 | 1.1E+00 | 1.0E-03 | na | 5.9E-03 | -- | -- | -- | -- | -- | -- | -- | -- | **1.1E+00** | **1.0E-03** | **na** | **5.9E-03** |
| Demeton | 0 | -- | 1.0E-01 | na | -- | -- | 1.0E-01 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **1.0E-01** | **na** | **--** |
| Dibenz(a,h)anthracene [C] | 0 | -- | -- | na | 4.9E-01 | -- | -- | na | 4.9E-01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **4.9E-01** |
| Dibutyl phthalate | 0 | -- | -- | na | 1.2E+04 | -- | -- | na | 1.2E+04 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.2E+04** |
| Dichloromethane (Methylene Chloride) [C] | 0 | -- | -- | na | 1.6E+04 | -- | -- | na | 1.6E+04 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.6E+04** |
| 1,2-Dichlorobenzene | 0 | -- | -- | na | 1.7E+04 | -- | -- | na | 1.7E+04 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.7E+04** |
| 1,3-Dichlorobenzene | 0 | -- | -- | na | 2.6E+03 | -- | -- | na | 2.6E+03 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **2.6E+03** |
| 1,4-Dichlorobenzene | 0 | -- | -- | na | 2.6E+03 | -- | -- | na | 2.6E+03 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **2.6E+03** |
| 3,3-Dichlorobenzidine[C] | 0 | -- | -- | na | 7.7E-01 | -- | -- | na | 7.7E-01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **7.7E-01** |
| Dichlorobromomethane [C] | 0 | -- | -- | na | 4.6E+02 | -- | -- | na | 4.6E+02 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **4.6E+02** |
| 1,2-Dichloroethane [C] | 0 | -- | -- | na | 9.9E+02 | -- | -- | na | 9.9E+02 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **9.9E+02** |
| 1,1-Dichloroethylene | 0 | -- | -- | na | 1.7E+04 | -- | -- | na | 1.7E+04 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.7E+04** |
| 1,2-trans-dichloroethylene | 0 | -- | -- | na | 1.4E+05 | -- | -- | na | 1.4E+05 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.4E+05** |
| 2,4-Dichlorophenol | 0 | -- | -- | na | 7.9E+02 | -- | -- | na | 7.9E+02 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **7.9E+02** |
| 2,4-Dichlorophenoxy acetic acid (2,4-D) | 0 | -- | -- | na | -- | -- | -- | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **--** |
| 1,2-Dichloropropane[C] | 0 | -- | -- | na | 3.9E+02 | -- | -- | na | 3.9E+02 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **3.9E+02** |
| 1,3-Dichloropropene | 0 | -- | -- | na | 1.7E+03 | -- | -- | na | 1.7E+03 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.7E+03** |
| Dieldrin [C] | 0 | 2.4E-01 | 5.6E-02 | na | 1.4E-03 | 2.4E-01 | 5.6E-02 | na | 1.4E-03 | -- | -- | -- | -- | -- | -- | -- | -- | **2.4E-01** | **5.6E-02** | **na** | **1.4E-03** |
| Diethyl Phthalate | 0 | -- | -- | na | 1.2E+05 | -- | -- | na | 1.2E+05 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.2E+05** |
| Di-2-Ethylhexyl Phthalate [C] | 0 | -- | -- | na | 5.9E+01 | -- | -- | na | 5.9E+01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **5.9E+01** |
| 2,4-Dimethylphenol | 0 | -- | -- | na | 2.3E+03 | -- | -- | na | 2.3E+03 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **2.3E+03** |
| Dimethyl Phthalate | 0 | -- | -- | na | 2.9E+06 | -- | -- | na | 2.9E+06 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **2.9E+06** |
| Di-n-Butyl Phthalate | 0 | -- | -- | na | 1.2E+04 | -- | -- | na | 1.2E+04 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.2E+04** |
| 2,4 Dinitrophenol | 0 | -- | -- | na | 1.4E+04 | -- | -- | na | 1.4E+04 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.4E+04** |
| 2-Methyl-4,6-Dinitrophenol | 0 | -- | -- | na | 7.65E+02 | -- | -- | na | 7.7E+02 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **7.7E+02** |
| 2,4-Dinitrotoluene [C] | 0 | -- | -- | na | 9.1E+01 | -- | -- | na | 9.1E+01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **9.1E+01** |
| Dioxin (2,3,7,8-tetrachlorodibenzo-p-dioxin) (ppq) | 0 | -- | -- | na | 1.2E-06 | -- | -- | na | na | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **na** |
| 1,2-Diphenylhydrazine[C] | 0 | -- | -- | na | 5.4E+00 | -- | -- | na | 5.4E+00 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **5.4E+00** |
| Alpha-Endosulfan | 0 | 2.2E-01 | 5.6E-02 | na | 2.4E+02 | 2.2E-01 | 5.6E-02 | na | 2.4E+02 | -- | -- | -- | -- | -- | -- | -- | -- | **2.2E-01** | **5.6E-02** | **na** | **2.4E+02** |
| Beta-Endosulfan | 0 | 2.2E-01 | 5.6E-02 | na | 2.4E+02 | 2.2E-01 | 5.6E-02 | na | 2.4E+02 | -- | -- | -- | -- | -- | -- | -- | -- | **2.2E-01** | **5.6E-02** | **na** | **2.4E+02** |
| Endosulfan Sulfate | 0 | -- | -- | na | 2.4E+02 | -- | -- | na | 2.4E+02 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **2.4E+02** |
| Endrin | 0 | 8.6E-02 | 3.6E-02 | na | 8.1E-01 | 8.6E-02 | 3.6E-02 | na | 8.1E-01 | -- | -- | -- | -- | -- | -- | -- | -- | **8.6E-02** | **3.6E-02** | **na** | **8.1E-01** |
| Endrin Aldehyde | 0 | -- | -- | na | 8.1E-01 | -- | -- | na | 8.1E-01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **8.1E-01** |

## Attachment 5

| Parameter | Background | Water Quality Criteria | | | | Wasteload Allocations | | | | Antidegradation Baseline | | | | Antidegradation Allocations | | | | **Most Limiting Allocations** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (ug/l unless noted) | Conc. | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | **Acute** | **Chronic** | **HH (PWS)** | **HH** |
| Ethylbenzene | 0 | -- | -- | na | 2.9E+04 | -- | -- | na | 2.9E+04 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **2.9E+04** |
| Fluoranthene | 0 | -- | -- | na | 3.7E+02 | -- | -- | na | 3.7E+02 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **3.7E+02** |
| Fluorene | 0 | -- | -- | na | 1.4E+04 | -- | -- | na | 1.4E+04 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.4E+04** |
| Foaming Agents | 0 | -- | -- | na | -- | -- | -- | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **--** |
| Guthion | 0 | -- | 1.0E-02 | na | -- | -- | 1.0E-02 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **1.0E-02** | **na** | **--** |
| Heptachlor [C] | 0 | 5.2E-01 | 3.8E-03 | na | 2.1E-03 | 5.2E-01 | 3.8E-03 | na | 2.1E-03 | -- | -- | -- | -- | -- | -- | -- | -- | **5.2E-01** | **3.8E-03** | **na** | **2.1E-03** |
| Heptachlor Epoxide[C] | 0 | 5.2E-01 | 3.8E-03 | na | 1.1E-03 | 5.2E-01 | 3.8E-03 | na | 1.1E-03 | -- | -- | -- | -- | -- | -- | -- | -- | **5.2E-01** | **3.8E-03** | **na** | **1.1E-03** |
| Hexachlorobenzene[C] | 0 | -- | -- | na | 7.7E-03 | -- | -- | na | 7.7E-03 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **7.7E-03** |
| Hexachlorobutadiene[C] | 0 | -- | -- | na | 5.0E+02 | -- | -- | na | 5.0E+02 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **5.0E+02** |
| Hexachlorocyclohexane Alpha-BHC[C] | 0 | -- | -- | na | 1.3E-01 | -- | -- | na | 1.3E-01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.3E-01** |
| Hexachlorocyclohexane Beta-BHC[C] | 0 | -- | -- | na | 4.6E-01 | -- | -- | na | 4.6E-01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **4.6E-01** |
| Hexachlorocyclohexane Gamma-BHC[C] (Lindane) | 0 | 9.5E-01 | na | na | 6.3E-01 | 9.5E-01 | -- | na | 6.3E-01 | -- | -- | -- | -- | -- | -- | -- | -- | **9.5E-01** | **--** | **na** | **6.3E-01** |
| Hexachlorocyclopentadiene | 0 | -- | -- | na | 1.7E+04 | -- | -- | na | 1.7E+04 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.7E+04** |
| Hexachloroethane[C] | 0 | -- | -- | na | 8.9E+01 | -- | -- | na | 8.9E+01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **8.9E+01** |
| Hydrogen Sulfide | 0 | -- | 2.0E+00 | na | -- | -- | 2.0E+00 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **2.0E+00** | **na** | **--** |
| Indeno (1,2,3-cd) pyrene [C] | 0 | -- | -- | na | 4.9E-01 | -- | -- | na | 4.9E-01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **4.9E-01** |
| Iron | 0 | -- | -- | na | -- | -- | -- | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **--** |
| Isophorone[C] | 0 | -- | -- | na | 2.6E+04 | -- | -- | na | 2.6E+04 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **2.6E+04** |
| Kepone | 0 | -- | 0.0E+00 | na | -- | -- | 0.0E+00 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **0.0E+00** | **na** | **--** |
| Lead | 0 | 4.9E+01 | 5.6E+00 | na | -- | 4.9E+01 | 5.6E+00 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **4.9E+01** | **5.6E+00** | **na** | **--** |
| Malathion | 0 | -- | 1.0E-01 | na | -- | -- | 1.0E-01 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **1.0E-01** | **na** | **--** |
| Manganese | 0 | -- | -- | na | -- | -- | -- | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **--** |
| Mercury | 0 | 1.4E+00 | 7.7E-01 | na | 5.1E-02 | 1.4E+00 | 7.7E-01 | na | 5.1E-02 | -- | -- | -- | -- | -- | -- | -- | -- | **1.4E+00** | **7.7E-01** | **na** | **5.1E-02** |
| Methyl Bromide | 0 | -- | -- | na | 4.0E+03 | -- | -- | na | 4.0E+03 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **4.0E+03** |
| Methoxychlor | 0 | -- | 3.0E-02 | na | -- | -- | 3.0E-02 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **3.0E-02** | **na** | **--** |
| Mirex | 0 | -- | 0.0E+00 | na | -- | -- | 0.0E+00 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **0.0E+00** | **na** | **--** |
| Monochlorobenzene | 0 | -- | -- | na | 2.1E+04 | -- | -- | na | 2.1E+04 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **2.1E+04** |
| Nickel | 0 | 1.0E+02 | 1.1E+01 | na | 4.6E+03 | 1.0E+02 | 1.1E+01 | na | 4.6E+03 | -- | -- | -- | -- | -- | -- | -- | -- | **1.0E+02** | **1.1E+01** | **na** | **4.6E+03** |
| Nitrate (as N) | 0 | -- | -- | na | -- | -- | -- | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **--** |
| Nitrobenzene | 0 | -- | -- | na | 1.9E+03 | -- | -- | na | 1.9E+03 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.9E+03** |
| N-Nitrosodimethylamine[C] | 0 | -- | -- | na | 8.1E+01 | -- | -- | na | 8.1E+01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **8.1E+01** |
| N-Nitrosodiphenylamine[C] | 0 | -- | -- | na | 1.6E+02 | -- | -- | na | 1.6E+02 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.6E+02** |
| N-Nitrosodi-n-propylamine[C] | 0 | -- | -- | na | 1.4E+01 | -- | -- | na | 1.4E+01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.4E+01** |
| Parathion | 0 | 6.5E-02 | 1.3E-02 | na | -- | 6.5E-02 | 1.3E-02 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **6.5E-02** | **1.3E-02** | **na** | **--** |
| PCB-1016 | 0 | -- | 1.4E-02 | na | -- | -- | 1.4E-02 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **1.4E-02** | **na** | **--** |
| PCB-1221 | 0 | -- | 1.4E-02 | na | -- | -- | 1.4E-02 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **1.4E-02** | **na** | **--** |
| PCB-1232 | 0 | -- | 1.4E-02 | na | -- | -- | 1.4E-02 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **1.4E-02** | **na** | **--** |
| PCB-1242 | 0 | -- | 1.4E-02 | na | -- | -- | 1.4E-02 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **1.4E-02** | **na** | **--** |
| PCB-1248 | 0 | -- | 1.4E-02 | na | -- | -- | 1.4E-02 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **1.4E-02** | **na** | **--** |
| PCB-1254 | 0 | -- | 1.4E-02 | na | -- | -- | 1.4E-02 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **1.4E-02** | **na** | **--** |
| PCB-1260 | 0 | -- | 1.4E-02 | na | -- | -- | 1.4E-02 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **1.4E-02** | **na** | **--** |
| PCB Total[C] | 0 | -- | -- | na | 1.7E-03 | -- | -- | na | 1.7E-03 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.7E-03** |

## Attachment 5

| Parameter | Background | Water Quality Criteria | | | | Wasteload Allocations | | | | Antidegradation Baseline | | | | Antidegradation Allocations | | | | **Most Limiting Allocations** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (ug/l unless noted) | Conc. | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | Acute | Chronic | HH (PWS) | HH | **Acute** | **Chronic** | **HH (PWS)** | **HH** |
| Pentachlorophenol [C] | 0 | 7.7E-03 | 5.9E-03 | na | 8.2E+01 | 7.7E-03 | 5.9E-03 | na | 8.2E+01 | -- | -- | -- | -- | -- | -- | -- | -- | **7.7E-03** | **5.9E-03** | **na** | **8.2E+01** |
| Phenol | 0 | -- | -- | na | 4.6E+06 | -- | -- | na | 4.6E+06 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **4.6E+06** |
| Pyrene | 0 | -- | -- | na | 1.1E+04 | -- | -- | na | 1.1E+04 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.1E+04** |
| Radionuclides (pCi/l except Beta/Photon) | 0 | -- | -- | na | -- | -- | -- | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **--** |
| Gross Alpha Activity | 0 | -- | -- | na | 1.5E+01 | -- | -- | na | 1.5E+01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.5E+01** |
| Beta and Photon Activity (mrem/yr) | 0 | -- | -- | na | 4.0E+00 | -- | -- | na | 4.0E+00 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **4.0E+00** |
| Strontium-90 | 0 | -- | -- | na | 8.0E+00 | -- | -- | na | 8.0E+00 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **8.0E+00** |
| Tritium | 0 | -- | -- | na | 2.0E+04 | -- | -- | na | 2.0E+04 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **2.0E+04** |
| Selenium | 0 | 2.0E+01 | 5.0E+00 | na | 1.1E+04 | 2.0E+01 | 5.0E+00 | na | 1.1E+04 | -- | -- | -- | -- | -- | -- | -- | -- | **2.0E+01** | **5.0E+00** | **na** | **1.1E+04** |
| Silver | 0 | 1.0E+00 | -- | na | -- | 1.0E+00 | -- | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **1.0E+00** | **--** | **na** | **--** |
| Sulfate | 0 | -- | -- | na | -- | -- | -- | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **--** |
| 1,1,2,2-Tetrachloroethane[C] | 0 | -- | -- | na | 1.1E+02 | -- | -- | na | 1.1E+02 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **1.1E+02** |
| Tetrachloroethylene[C] | 0 | -- | -- | na | 8.9E+01 | -- | -- | na | 8.9E+01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **8.9E+01** |
| Thallium | 0 | -- | -- | na | 6.3E+00 | -- | -- | na | 6.3E+00 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **6.3E+00** |
| Toluene | 0 | -- | -- | na | 2.0E+05 | -- | -- | na | 2.0E+05 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **2.0E+05** |
| Total dissolved solids | 0 | -- | -- | na | -- | -- | -- | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **--** |
| Toxaphene [C] | 0 | 7.3E-01 | 2.0E-04 | na | 7.5E-03 | 7.3E-01 | 2.0E-04 | na | 7.5E-03 | -- | -- | -- | -- | -- | -- | -- | -- | **7.3E-01** | **2.0E-04** | **na** | **7.5E-03** |
| Tributyltin | 0 | 4.6E-01 | 6.3E-02 | na | -- | 4.6E-01 | 6.3E-02 | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **4.6E-01** | **6.3E-02** | **na** | **--** |
| 1,2,4-Trichlorobenzene | 0 | -- | -- | na | 9.4E+02 | -- | -- | na | 9.4E+02 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **9.4E+02** |
| 1,1,2-Trichloroethane[C] | 0 | -- | -- | na | 4.2E+02 | -- | -- | na | 4.2E+02 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **4.2E+02** |
| Trichloroethylene [C] | 0 | -- | -- | na | 8.1E+02 | -- | -- | na | 8.1E+02 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **8.1E+02** |
| 2,4,6-Trichlorophenol [C] | 0 | -- | -- | na | 6.5E+01 | -- | -- | na | 6.5E+01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **6.5E+01** |
| 2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex) | 0 | -- | -- | na | -- | -- | -- | na | -- | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **--** |
| Vinyl Chloride[C] | 0 | -- | -- | na | 6.1E+01 | -- | -- | na | 6.1E+01 | -- | -- | -- | -- | -- | -- | -- | -- | **--** | **--** | **na** | **6.1E+01** |
| Zinc | 0 | 6.5E+01 | 6.6E+01 | na | 6.9E+04 | 6.5E+01 | 6.6E+01 | na | 6.9E+04 | -- | -- | -- | -- | -- | -- | -- | -- | **6.5E+01** | **6.6E+01** | **na** | **6.9E+04** |

Notes:

1. All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
2. Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
3. Metals measured as Dissolved, unless specified otherwise
4. "C" indicates a carcinogenic parameter
5. Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information.
   Antidegradation WLAs are based upon a complete mix.
6. Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
   = (0.1(WQC - background conc.) + background conc.) for human health
7. WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens, Harmonic Mean for Carcinogens, and Annual Average for Dioxin. Mixing ratios may be substituted for stream flows where appropriate.

| Metal | Target Value (SSTV) |
|---|---|
| Antimony | 4.3E+03 |
| Arsenic | 9.0E+01 |
| Barium | na |
| Cadmium | 3.9E-01 |
| Chromium III | 2.5E+01 |
| Chromium VI | 6.4E+00 |
| Copper | 2.8E+00 |
| Iron | na |
| Lead | 3.4E+00 |
| Manganese | na |
| Mercury | 5.1E-02 |
| Nickel | 6.8E+00 |
| Selenium | 3.0E+00 |
| Silver | 4.2E-01 |
| Zinc | 2.6E+01 |

Note: do not use QL's lower than the minimum QL's provided in agency guidance

## Attachment 5

Facility = Mt. View Nursing Home STP
Chemical = Ammonia as N
Chronic averaging period = 30
WLAa = 8.41
WLAc = 1.32
Q.L. = 0.2
# samples/mo. = 2
# samples/wk. = 1

Summary of Statistics:

# observations = 1
Expected Value = 9
Variance = 29.16
C.V. = 0.6
97th percentile daily values = 21.9007
97th percentile 4 day average = 14.9741
97th percentile 30 day average= 10.8544
# < Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 2.66332452330953
Average Weekly limit = 2.66332452330953
Average Monthly LImit = 2.16577285832801

The data are:

9

Facility = Mt. View Nursing Home STP
Chemical = Total Residual Chlorine
Chronic averaging period = 4
WLAa = 0.019
WLAc = 0.011
Q.L. = 0.1
# samples/mo. = 28
# samples/wk. = 7

Summary of Statistics:

# observations = 1
Expected Value = 2
Variance = 1.44
C.V. = 0.6
97th percentile daily values = 4.86683
97th percentile 4 day average = 3.32758
97th percentile 30 day average= 2.41210
# < Q.L. = 0
Model used = BPJ Assumptions, type 2 data

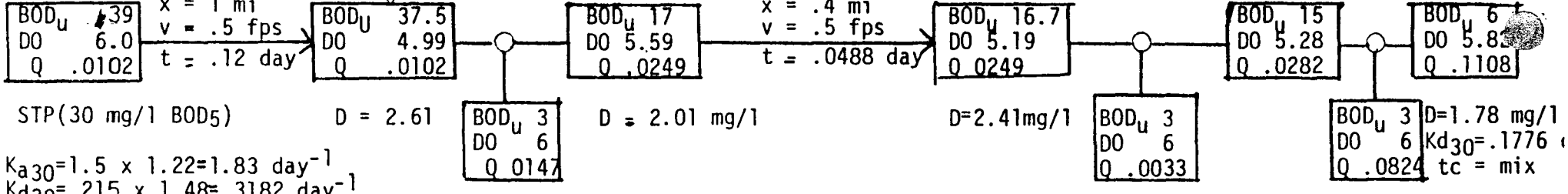
A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 1.60883226245855E-02
Average Weekly limit = 9.8252545713861E-03
Average Monthly LImit = 8.02152773888032E-03

The data are:

2

MT. VIEW NURSING HOME - MADISON COUNTY

(Madison Mills Quad)




STP(30 mg/l $BOD_5$)

D = 2.61

D = 2.01 mg/l

D=2.41mg/l

D=1.78 mg/l

$K_{a30}$=1.5 x 1.22=1.83 $day^{-1}$

$K_{d30}$=.215 x 1.48=.3182 $day^{-1}$

$Kd_{30}$=.1776

tc = 1.01 days

tc = mix

Dc = 4.9 mg/l

Da = 1.6 mg/l

unnamed tributary
D.A. = .44 sq.mi.
Critical discharge=.052 cfs/sq.mi.
Robinson River near Locust Dale

stretch flow
D.A. = .1 sq.mi.

Great Run
D.A. = 2.46 sq.mi.

30 mg/l $BOD_5$ & S.S. and 6.0 mg/l D.O. in effluent meets standards

**Attachment 8**

OK via telephone 5-18-78 amb

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of treated wastewater into a water body in Madison County, Virginia.

PUBLIC COMMENT PERIOD: July XX, 2009 to 5:00 p.m. on August XX, 2009

PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – Wastewater issued by DEQ, under the authority of the State Water Control Board

APPLICANT NAME, ADDRESS AND PERMIT NUMBER: Mountain View Nursing Home, Inc.
1776 Elly Road, Aroda, VA 22709
VA0063347

NAME AND ADDRESS OF FACILITY: Mountain View Nursing Home
1776 Elly Road, Aroda, VA 22709

PROJECT DESCRIPTION: Mountain View Nursing Home has applied for a reissuance of a permit for the private Mountain View Nursing Home STP. The applicant proposes to release treated sewage wastewaters from a nursing facility and dormitories at a rate of 0.015 million gallons per day into a water body. The sludge will be transported by a licensed contractor to Orange County WWTP for disposal. The facility proposes to release the treated sewage in the Great Run, UT in Madison County in the Rappahannock River watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: pH, $BOD_5$, Chlorine, Total Suspended Solids, Dissolved Oxygen, and *E. coli*.

HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. DEQ may hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: The public may review the documents at the DEQ-Northern Regional Office by appointment.
Name: Susan Oakes
Address: DEQ-Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193
Phone: (703) 583-3863 E-mail: susan.oakes@deq.virginia.gov Fax: (703) 583-3821

Revised 2/2003

***State "Transmittal Checklist" to Assist in Targeting***
***Municipal and Industrial Individual NPDES Draft Permits for Review***

**Part I. State Draft Permit Submission Checklist**

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

| | |
|---|---|
| Facility Name: | Mountain View Nursing Home STP |
| NPDES Permit Number: | VA0063347 |
| Permit Writer Name: | Susan Oakes |
| Date: | May 28, 2009 |

**Major** [ ] **Minor** [X ] **Industrial** [ ] **Municipal** [ X ]

| **I.A. Draft Permit Package Submittal Includes:** | **Yes** | **No** | **N/A** |
|---|---|---|---|
| 1. Permit Application? | X | | |
| 2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)? | X | | |
| 3. Copy of Public Notice? | X | | |
| 4. Complete Fact Sheet? | X | | |
| 5. A Priority Pollutant Screening to determine parameters of concern? | X | | |
| 6. A Reasonable Potential analysis showing calculated WQBELs? | X | | |
| 7. Dissolved Oxygen calculations? | X | | |
| 8. Whole Effluent Toxicity Test summary and analysis? | | | X |
| 9. Permit Rating Sheet for new or modified industrial facilities? | | | X |

| **I.B. Permit/Facility Characteristics** | **Yes** | **No** | **N/A** |
|---|---|---|---|
| 1. Is this a new, or currently unpermitted facility? | | X | |
| 2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit? | X | | |
| 3. Does the fact sheet **or** permit contain a description of the wastewater treatment process? | X | | |
| 4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit? | | X | |
| 5. Has there been any change in streamflow characteristics since the last permit was developed? | | X | |
| 6. Does the permit allow the discharge of new or increased loadings of any pollutants? | | X | |
| 7. Does the fact sheet **or** permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses? | X | | |
| 8. Does the facility discharge to a 303(d) listed water? **(Downstream segment of the Robinson River)** | X | | |
| a. Has a TMDL been developed and approved by EPA for the impaired water? | X | | |
| b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit? | | | X |
| c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water? | X | | |
| 9. Have any limits been removed, or are any limits less stringent, than those in the current permit? | | X | |
| 10. Does the permit authorize discharges of storm water? | | X | |

| | | | |
|---|---|---|---|
| **I.B. Permit/Facility Characteristics – cont.** | **Yes** | **No** | **N/A** |
| 11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production? | | X | |
| 12. Are there any production-based, technology-based effluent limits in the permit? | | X | |
| 13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures? | | X | |
| 14. Are any WQBELs based on an interpretation of narrative criteria? | X | | |
| 15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations? | | X | |
| 16. Does the permit contain a compliance schedule for any limit or condition? | | X | |
| 17. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)? | | X | |
| 18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated? | X | | |
| 19. Is there any indication that there is significant public interest in the permit action proposed for this facility? | | X | |
| 20. Have previous permit, application, and fact sheet been examined? | X | | |

**Part II. NPDES Draft Permit Checklist**

**Region III NPDES Permit Quality Checklist – for POTWs**
*(To be completed and included in the record only for POTWs)*

| **II.A. Permit Cover Page/Administration** | **Yes** | **No** | **N/A** |
|---|---|---|---|
| 1. Does the fact sheet or permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)? | X | | |
| 2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)? | X | | |

| **II.B. Effluent Limits – General Elements** | **Yes** | **No** | **N/A** |
|---|---|---|---|
| 1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)? | X | | |
| 2. Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit? | X | | |

| **II.C. Technology-Based Effluent Limits (POTWs)** | **Yes** | **No** | **N/A** |
|---|---|---|---|
| 1. Does the permit contain numeric limits for ALL of the following: BOD (or alternative, e.g., CBOD, COD, TOC), TSS, and pH? | X | | |
| 2. Does the permit require at least 85% removal for BOD (or BOD alternative) and TSS (or 65% for equivalent to secondary) consistent with 40 CFR Part 133? | X | | |
| a. If no, does the record indicate that application of WQBELs, or some other means, results in more stringent requirements than 85% removal or that an exception consistent with 40 CFR 133.103 has been approved? | | | X |
| 3. Are technology-based permit limits expressed in the appropriate units of measure (e.g., concentration, mass, SU)? | X | | |
| 4. Are permit limits for BOD and TSS expressed in terms of both long term (e.g., average monthly) and short term (e.g., average weekly) limits? | X | | |
| 5. Are any concentration limitations in the permit less stringent than the secondary treatment requirements (30 mg/l BOD5 and TSS for a 30-day average and 45 mg/l BOD5 and TSS for a 7-day average)? | | X | |
| a. If yes, does the record provide a justification (e.g., waste stabilization pond, trickling filter, etc.) for the alternate limitations? | | | X |

| **II.D. Water Quality-Based Effluent Limits** | **Yes** | **No** | **N/A** |
|---|---|---|---|
| 1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality? | X | | |
| 2. Does the fact sheet indicate that any WQBELs were derived from a completed and EPA approved TMDL? | X | | |
| 3. Does the fact sheet provide effluent characteristics for each outfall? | X | | |
| 4. Does the fact sheet document that a "reasonable potential" evaluation was performed? | X | | |
| a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures? | X | | |
| b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone? | X | | |
| c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"? | X | | |
| d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations)? | X | | |
| e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined? | X | | |
| **II.D. Water Quality-Based Effluent Limits – cont.** | **Yes** | **No** | **N/A** |

| | | | |
|---|---|---|---|
| 5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet? | X | | |
| 6. For all final WQBELs, are BOTH long-term AND short-term effluent limits established? | X | | |
| 7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)? | X | | |
| 8. Does the record indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy? | X | | |

| **II.E. Monitoring and Reporting Requirements** | **Yes** | **No** | **N/A** |
|---|---|---|---|
| 1. Does the permit require at least annual monitoring for all limited parameters and other monitoring as required by State and Federal regulations? | X | | |
| a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver? | | | |
| 2. Does the permit identify the physical location where monitoring is to be performed for each outfall? | X | | |
| 3. Does the permit require at least annual influent monitoring for BOD (or BOD alternative) and TSS to assess compliance with applicable percent removal requirements? | | X | |
| 4. Does the permit require testing for Whole Effluent Toxicity? | | | X |

| **II.F. Special Conditions** | **Yes** | **No** | **N/A** |
|---|---|---|---|
| 1. Does the permit include appropriate biosolids use/disposal requirements? | X | | |
| 2. Does the permit include appropriate storm water program requirements? | | | X |

| **II.F. Special Conditions – cont.** | **Yes** | **No** | **N/A** |
|---|---|---|---|
| 3. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements? | | | X |
| 4. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations? | X | | |
| 5. Does the permit allow/authorize discharge of sanitary sewage from points other than the POTW outfall(s) or CSO outfalls [i.e., Sanitary Sewer Overflows (SSOs) or treatment plant bypasses]? | | X | |
| 6. Does the permit authorize discharges from Combined Sewer Overflows (CSOs)? | | X | |
| a. Does the permit require implementation of the "Nine Minimum Controls"? | | | X |
| b. Does the permit require development and implementation of a "Long Term Control Plan"? | | | X |
| c. Does the permit require monitoring and reporting for CSO events? | | | X |
| 7. Does the permit include appropriate Pretreatment Program requirements? | | | X |

| **II.G. Standard Conditions** | **Yes** | **No** | **N/A** |
|---|---|---|---|
| 1. Does the **permit** contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions? | X | | |

**List of Standard Conditions – 40 CFR 122.41**

| | | |
|---|---|---|
| Duty to comply | Property rights | Reporting Requirements |
| Duty to reapply | Duty to provide information | Planned change |
| Need to halt or reduce activity not a defense | Inspections and entry | Anticipated noncompliance |
| | Monitoring and records | Transfers |
| Duty to mitigate | Signatory requirement | Monitoring reports |
| Proper O & M | Bypass | Compliance schedules |
| Permit actions | Upset | 24-Hour reporting |
| | | Other non-compliance |

| | | | |
|---|---|---|---|
| 2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for POTWs regarding notification of new introduction of pollutants and new industrial users [40 CFR 122.42(b)]? | X | | |

**Part III. Signature Page**

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

| | |
|---|---|
| Name | Susan A. Oakes |
| Title | Environmental Specialist II |
| Signature |  |
| Date | May 28, 2009 |